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Møller, O. S.; Buchman, K.; Dalsgaard, Inger

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A simple and low-toxic method of preparing small specimens of bacteria, flagellates and their likes for Scanning Electron Microscopy

Møller O.S.[1], Buchmann K.[1], Dalsgaard I.[2]

[1]*Laboratory of Aquatic Pathobiology, Department of Veterinary Disease Biology, University of Copenhagen, Denmark*

[2]*National Veterinary Institute, Section for Bacteriology, Pathology, and Parasitology, Technical University of Denmark, Denmark*

The preparation of samples of bacteria and other very small organisms (<50 µm) for Scanning Electron Microscopy is often complex and intricate, which typically involve the use of specialized filter systems, complex handling and toxic chemicals. Based on the methods described in the literature and our own tests, we have distilled a simpler (although slightly crude) method to prepare bacterial samples in a fast way. We only employ readily available chemicals requiring no more than a fume hood, and low-cost, standard lab equipment like single use filters. The method is excellent for achieving relatively quick results for illustration purposes and does not require handling of highly toxic substances like Osmium-tetraoxide, which typically necessitates skilled/trained lab personnel. Thus, this method is well-suited for testing different bacterial concentrations, biotypes, and other variables relatively quickly. So far, this method has yielded good results on several pathogenic bacteria and parasites; *Aeromonas salmonicida*, *Yersinia ruckeri*, *Ichthyobodo necator* and theronts of *Ichthyophthirius multifiliis*.

Presenting author: Ole Steen Møller, Oles@sund.ku.dk